

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 9-16, 18, 19, 21, 22, and 24-28 are pending. In the present amendment, Claims 9, 14-16, 18, 21, and 24 are currently amended, Claims 17, 20, and 23 are canceled without prejudice or disclaimer, and new Claims 26-28 are added. Support for the present amendment can be found in the original specification, for example, at page 2, line 31, at page 3, lines 1 and 2, at page 16, line 31 to page 17, line 1, at page 18, lines 3-28, at page 20, lines 15-25, at page 21, lines 11-17, at page 33, lines 15-19, at page 33, line 32 to page 34, line 8, at page 36, line 32 to page 37, line 8, at page 38, line 17 to page 39, line 15, at page 41, line 17 to page 42, line 28, and in Figures 2-4 and 6-16. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, Claims 9-14 and 17-19 were rejected under 35 U.S.C. § 101; Claims 9, 15, and 16 were rejected under 35 U.S.C. § 112, first paragraph; Claims 9-16, 18, 21, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Shropshire (International Publication No. WO02/059801) in view of Alibozek (Non-patent document titled “Smart software builds a better harness”); Claims 17, 20, and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Shropshire in view of Alibozek, and further in view of Ishikawa et al. (see U.S. Patent No. 6,457,165, hereinafter “Ishikawa”); and Claims 19, 22, and 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over Shropshire in view of Alibozek, and further in view of Ozaki (U.S. Patent No. 7,200,537).

Regarding the rejection of Claims 9-14 and 17-19 under 35 U.S.C. § 101, it is noted that Claim 9 is amended to recite a method for synthesis of a routing with a design tool stored in a memory on a computer. Further, the method includes evaluating via a processor on the computer and determining via the processor on the computer. Additionally, the displaying is

done on a display screen of the computer. Support for these amendments can be found in original specification, for example, at page 2, line 31, at page 3, lines 1 and 2, at page 16, line 31 to page 17, line 1, and at page 70, lines 3-6. It is noted that a person of ordinary skill in the art would understand that a computer inherently includes a processor as hardware thereof. Thus, it is respectfully submitted that no new matter is added.

Accordingly, the method recited in Claim 9 is clearly tied to the computer as evidenced by the evaluating and determining being done via a processor of the computer. Further, the displaying is done via a display screen on the computer and is not merely insignificant post-solution activity. Instead, as evidenced by reading the original specification and viewing the figures, the claimed method is intended to provide a designer of wiring routings with an efficient interface which allows the designer to set constraints for the routing via the zones which are shown on the display. Accordingly, it is respectfully submitted that Claim 9, and all claims dependent thereon, recite statutory subject matter. Thus, it is respectfully requested that the rejection of Claims 9-14 and 17-19 under 35 U.S.C. § 101 be withdrawn.

Regarding the rejection of Claims 9, 15, and 16 under 35 U.S.C. § 112, first paragraph, the Office Action takes the position that “Applicant does not show support for the amended limitations; for examples, the guide and the mean of a single zone disclosed in Claims 9, 15, 16 are not disclosed in the original specification.” Applicants note that an exemplary embodiment of the guide is disclosed as a compass, for example, at page 18, lines 11 to 24 and in Figure 2. As explained in the specification, the compass indicates how the zones are situated relative to one another. Regarding the mean of a single zone, it is noted that the mean, which relates to the valid routing, was recited in the originally filed claims. Further, the valid routings are described in the original specification, for example, at page 21, lines 11-17. Further, it is noted that a reading of the entirety of the specification defines

certain parameters that can be adjusted to determine customized valid routings. Accordingly, it is respectfully submitted that Claims 9, 15, and 16 are fully supported by the original specification. Therefore, it is respectfully requested that the rejection of Claims 9, 15, and 16 under 35 U.S.C. § 112, first paragraph be withdrawn.

Turning now to the rejections under 35 U.S.C. § 103(a), Applicants respectfully request reconsideration of these rejections and traverse these rejections, as discussed below.

Claim 9 recites, in part, a method for synthesis of a routing with a design tool stored in a memory on a computer comprising “displaying, in a first view on a display screen of the computer, a plurality of zones into which the service variants and the calculator variants are grouped, wherein the first view includes a guide to indicate how the plurality of zones are situated relative to one another, the plurality of zones schematically represent a product for which the routing is synthesized, and the routings between the zones are not shown in the first view.” Further, the method recited in Claim 9 also recites “displaying, in a second view on the display screen, the valid routing that minimizes the mean of a single zone of the plurality of zones.” Accordingly, Claim 9 has been amended to include the subject matter from canceled Claim 17.

As can be seen in the exemplary embodiment shown in Figure 2, a first view on a display screen of a computer shows a plurality of zones that schematically represent a product for which the routing is synthesized, such as an automobile. Such a display includes a guide, such as a compass, to let a user know the orientation of the schematic representation of the product. Further, the routing between the zones is not shown in order to simplify the overall display of the product. However, when an individual zone from the plurality of zones is selected, as can be seen in Figure 3, a second view is shown including the valid routings. Accordingly, when a user wishes to see the routings in a single zone, that single zone can be selected and then shown in a different display whereby the user can determine the detail of

the routings including connections, etc. It is respectfully submitted that the cited references do not disclose or suggest every feature recited in amended Claim 9.

Shropshire describes a design system that creates data relating to a modular wiring harness.<sup>1</sup> The system described in Shropshire includes a 3D design system 30 that defines the spatial orientation of a wiring harness with regard to the structure of the automobile in which it is to be used.<sup>2</sup> Further Shropshire also describes that definitions of the electrical connections and components are used to produce a 2D harness drawing 32.<sup>3</sup>

On page 6, the Office Action relies on Alibozek as describing the displaying elements of Claim 9. Alibozek describes software for building a wiring harness and also shows displays of the wiring harness and schematics, nailboard drawings, and 3D displays of virtual prototypes.<sup>4</sup>

In rejecting Claim 17, in section 27 on pages 15 and 16, the Office Action relies on Ishikawa as describing displaying in the first view and not showing the valid routings of the service variants and the calculator variants. Specifically, the Office Action cites Figure 12 of Ishikawa.

However, it is respectfully submitted that the cited combination of Shropshire in view of Alibozek, and further in view of Ishikawa does not disclose or suggest “displaying, in a first view on a display screen of the computer, a plurality of zones into which the service variants and the calculator variants are grouped, wherein the first view includes a guide to indicate how the plurality of zones are situated relative to one another, the plurality of zones schematically represent a product for which the routing is synthesized, and the routings between the zones are not shown in the first view; and displaying, in a second view on the

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<sup>1</sup> See Shropshire, at page 5, lines 7-15.

<sup>2</sup> See Shropshire, at page 32, lines 20-22 and in Figure 4.

<sup>3</sup> See Shropshire, at page 32, lines 22-25 and in Figure 4.

<sup>4</sup> See Alibozek, in the Figures on pages 91 and 92 and their corresponding descriptions.

display screen, the valid routing that minimizes the mean of a single zone of the plurality of zones,” as recited in amended Claim 9.

Instead, Figure 12 of Ishikawa shows a plurality of wiring routes such as routes P1 and P2 between first auxiliary unit 6-1 and second auxiliary unit 6-2. Therefore, Ishikawa does not cure the deficiencies of Shropshire in view of Alibozek regarding displaying a plurality of zones that schematically represent a product for which the routing is synthesized without showing the routings between the zones. Accordingly, it is respectfully submitted that the cited combination does not disclose or suggest every feature recited in amended Claim 9. Thus, it is respectfully requested that the rejection of Claim 9, and all claims dependent thereon, be withdrawn.

Independent Claim 15 and 16, while directed to alternative embodiments, each recite features similar to those discussed above with respect to Claim 9. Accordingly, it is also respectfully requested that the rejection of Claims 15 and 16 be withdrawn.

Dependent Claims 18, 21, and 24 are dependent on Claims 9, 15, and 16, and thus are believed to be patentable for at least the reasons discussed above with respect to Claims 9, 15, and 16. Further, Claim 18 recites that “the displaying in the second view includes prohibited subzones which represent a portion of the product through which wires cannot be passed such that the valid routings do not pass through the prohibited subzones.” Thus, the displaying includes showing prohibited subzones which represent a portion of the product through which the wires cannot be passed, such as the window and the tailgate of a vehicle in an exemplary embodiment discussed in the original specification at page 20, lines 15-25.

The Office Action relies on the Figure in the upper right-hand corner of page 91 of Alibozek as showing prohibited subzones because the Figure has areas where the routings do not pass. However, there is nothing in the Figure of Alibozek which indicate that these areas are areas through which wires cannot be passed. Instead, these areas only represent portions

where the wires are not currently being passed and there is nothing else in the Figure which indicate wires cannot be passed through those areas. Therefore, the blank space in the Figure of Alibozek is not the claimed prohibited subzones. Thus, it is respectfully submitted that Claim 18, and Claims 21 and 24 which recite similar subject matter to Claims 18, further patentably define over the cited references.

Regarding the rejection of Claims 19, 22, and 25, it is noted that these claims depend on independent Claims 9, 15, and 16, respectively. Thus, it is respectfully submitted that Claims 19, 22, and 25 are patentable for the reasons discussed above with respect to Claims 9, 15, and 16. Further, it is respectfully submitted that Ozaki does not cure the above noted deficiencies of Shropshire in view of Alibozek. Thus, it is respectfully requested that the rejection of Claims 19, 22, and 25 as unpatentable over Shropshire in view of Alibozek, and further in view of Ozaki be withdrawn.

New Claims 26-28 are added by the present amendment. New Claims 26-28 explain how the different parameters are obtained via a display of a user interface for the design tool that includes a hierarchical list of service variants that a user can select and then enter, via a graphical zone, a desired configuration of the particular service variant. Exemplary embodiments of this interaction are explained in the original specification, for example, at page 6, line 22 to page 70, line 2 with reference to Figures 6-18(B). In order to provide more exact page and line number support, please see the non-limiting exemplary embodiments described at page 33, lines 15-19, at page 33, line 32 to page 34, line 8, at page 36, line 32 to page 37, line 8, at page 38, line 17 to page 39, line 5, at page 41, line 17 to page 42, line 28, and in Figures 6-16. Thus, it is respectfully submitted that no new matter is added.

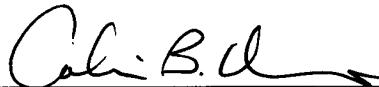
Applicants respectfully submit that none of the cited references, either alone or in any combination thereof, disclose or suggest obtaining different parameters from a user interface that includes a hieroglyphical list including the service variants that can be selected and

displayed in a graphical zone where a user can enter a desired configuration of the particular service variants selected. Therefore, it is respectfully submitted that Claims 26-28 further patentably define over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

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